U.S. Patent Application No. 09/774,266
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AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

Claim 1 (amended): A polymer blend comprising:

a) at least one acrylic ~~or vinyl~~ resin or ~~both~~ at least one acrylic resin and at least one vinyl resin, wherein said at least one acrylic resin or vinyl resin has at least one ionic or ionizable group; and

b) at least one thermoplastic fluoropolymer, wherein a) and b) are different.

Claim 2 (original): The polymer blend of claim 1, wherein said at least one thermoplastic fluoropolymer is a copolymer.

Claim 3 (original): The polymer blend of claim 1, wherein said fluoropolymer comprises poly(vinylidene fluoride).

Claim 4 (original): The polymer blend of claim 1, wherein said fluoropolymer comprises a) poly(vinylidene fluoride) and b) hexafluoropropylene, tetrafluoroethylene, chlorotetrafluoroethylene, vinyl fluoride, or combinations thereof.

Claim 5 (original): The polymer blend of claim 1, wherein said fluoropolymer comprises a) from about 30 weight % to about 100 weight % of a poly(vinylidene fluoride) and from 0 weight % to about 70 weight % of at least one poly(alkylene) containing at least one fluorine atom.

Claim 6 (original): The polymer blend of claim 1, wherein said ionic or ionizable group

is a sulfonated group or a phosphonated group or both.

Claim 7 (original): The polymer blend of claim 1, wherein said at least one thermoplastic fluoropolymer is a core and said at least one acrylic resin having at least one ionic or ionizable group partially coats said core.

Claim 8 (original): The polymer blend of claim 1, wherein said at least one acrylic or vinyl resin or both having at least one ionic or ionizable group is formed by polymerizing at least one acrylic or vinyl or both containing monomer, at least one co-polymerizable monomer, at least one monomer having at least one functional group, and at least one monomer having ionic or ionizable groups, wherein each monomer is different from one another.

Claim 9 (original): The polymer blend of claim 8, wherein said monomer having ionic or ionizable groups is a sulfonated or phosphonated monomer.

Claim 10 (original): The polymer blend of claim 1, wherein said acrylic resin or vinyl resin is fluorinated.

Claim 11 (original): The polymer blend of claim 1, wherein said acrylic resin or vinyl resin is a copolymer.

Claim 12 (withdrawn): A composition comprising the polymer product of blending:

a) at least one polymer comprising acrylic units, vinyl units or both, and at least one ionic or ionizable group; and

b) at least one thermoplastic fluoropolymer, wherein a) and b) are different.

Claim 13 (withdrawn): The composition of claim 12, wherein said acrylic units or vinyl units are fluorinated.

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Claim 14 (withdrawn): The composition of claim 12, wherein said at least one polymer is a copolymer.

Claim 15 (currently amended): A polymeric ion membrane comprising the polymer blend of claim ~~1~~ 6.

Claim 16 (withdrawn): A membrane electrode assembly comprising the polymeric ion membrane of claim 15.

Claim 17 (withdrawn): A fuel cell comprising the membrane electrode assembly of claim 16.

Claim 18 (withdrawn): A fuel cell comprising anode and cathode compartments separated by a polymeric ionic exchange membrane, wherein said membrane comprises the polymer blend of claim 1.

Claim 19 (withdrawn): The fuel cell of claim 18, wherein said membrane further comprises at least one filler.

Claim 20 (withdrawn): The fuel cell of claim 18, further comprising at least one porous support layer which is embedded in said membrane.

Claim 21 (withdrawn): The fuel cell of claim 18, wherein said fuel cell operates with a liquid hydrocarbon fuel.

Claim 22 (withdrawn): The fuel cell of claim 18, wherein the fuel cell operates with a methanol fuel.

Claim 23 (withdrawn): A battery comprising anode and cathode compartments separated by a polymeric ionic exchange membrane, wherein said membrane comprises the polymer blend of

claim 1.

Claim 24 (withdrawn): A method of making the composition of claim 1 comprising:

a) conducting a seed emulsion polymerization of a) at least one polymerizable monomer comprising acrylic or vinyl units in a dispersion of at least one fluoropolymer capable of dispersing in a medium.

Claim 25 (withdrawn): The method of claim 24, wherein said at least one fluoropolymer is a copolymer.

Claim 26 (withdrawn): The method of claim 24, wherein said fluoropolymer comprises poly(vinylidene fluoride).

Claim 27 (withdrawn): The method of claim 24, wherein said fluoropolymer comprises a) poly(vinylidene fluoride) and b) hexafluoropropylene, tetrafluoroethylene, chlorotetrafluoroethylene vinyl fluoride, or combinations thereof.

Claim 28 (withdrawn): The method of claim 24, wherein said fluoropolymer comprises a) from about 30 weight % to about 100 weight % of a poly(vinylidene fluoride) and from 0 weight % to about 70 weight % of at least one poly(alkylene) containing at least one fluorine atom.

Claim 29 (withdrawn): The method of claim 24, wherein said ionic or ionizable group is a sulfonated group or a phosphonated group or both.

Claim 30 (withdrawn): A method of making the composition of claim 1 comprising blending:

a) at least one polymer comprising acrylic units, vinyl units, or both and at least one ionic or ionizable group; and

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b) at least one thermoplastic fluoropolymer, wherein a) and b) are different.

Claim 31 (withdrawn): The method of claim 30, wherein said blending is accomplished by melt or extrusion blending or solvent blending.

Claim 32 (withdrawn): The method of claim 30, wherein a) polymer is prepared by emulsion, bulk, or solution polymerization.

Claim 33 (original): A membrane comprising the composition of claim 1.

Claim 34 (withdrawn): A composition comprising the polymer product of polymerizing a) at least one polymerizable acrylic, or vinyl containing monomer, or both, and at least one monomer comprising at least one ionic or ionizable group, or both; b) in the presence of a dispersion of at least one fluoropolymer capable of dispersing in a medium.